

Borough of



Chelmsford.

ANNUAL REPORT

OF THE

Medical Officer of Health

(H. W. NEWTON, M.R.C.S., L.R.C.P., D.P.H.)

FOR

1911.

CHELMSFORD:

Printed by J. Dutton, County & Borough Printer, Tindal Street.



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FAIRFIELD,
CHELMSFORD,

February 29th, 1912.

TO THE MAYOR, ALDERMEN, AND COUNCILLORS
OF THE BOROUGH OF CHELMSFORD.

GENTLEMEN,

I have pleasure to submit my Sixteenth Annual Report on the Public Health of the Borough of Chelmsford.

I regret to say that in many respects this report will not compare favourably with my reports for the preceding three years, but that, I expect, will be found to be the case more or less throughout the whole country. That to a very great extent will be found to be due to the abnormally hot and dry summer and also to some extent to the excessive rainfall of the last quarter of the year. However, it must be admitted that during the years 1908, 1909 and 1910, the death rates had fallen in the Borough to an abnormally low level, with the low general death-rate also, the infantile death-rate and the zymotic death-rate were exceedingly low. In point of fact the general rate of sickness throughout the Borough during those years had been very low. This year due entirely, I believe, to abnormal heat and drought followed by excessive damp and rainfall it will be seen that the general and infantile death-rates have considerably increased, the zymotic death-rate also has increased, but not to the same proportion, although there has been a much greater zymotic sickness rate. To compensate and to some extent to counterbalance these increases I have very much pleasure in reporting that the birth-rate has improved. This improvement is only slight, yet it is a definite improvement over the birth-rate of the past two years. It will be seen also from Table II. that the number of cases of Notifiable Infectious Diseases has during this past year very markedly increased. The total number of cases is increased by the inclusion of certain cases of Pulmonary Tuberculosis which number will be again increased very considerably in 1912 since all cases of Pulmonary Tuberculosis in whatever station of life this disease is discovered become now notifiable. In my opinion the inclusion of Pulmonary Tuberculosis among those diseases already known as "Infectious" is an exceedingly wise step and will, I believe, greatly assist in largely reducing the number of these cases.

During the past year completion certificates have been given for sixty-six new houses in the Borough. Vicarage Road has been made up and taken over; this work is also in hand in regard to Nursery Road. A complete new sewer has been laid in Cherry Garden Lane and many repairs to existing sewers carried out. The Sewage Farm maintains its power at present to deal efficiently with the Borough sewage.

The following give shortly the more important figures connected with the Annual Report of the Medical Officer of Health and make comparison with like figures from other towns more easy :—

Population (at the middle of 1911)	18,008.
Birth-rate	20·54 per 1,000 inhabitants.
Average Birth-rate for last 10 years	23·63 „ „
Death-rate	12·00 „ „
Average Death-rate for last 10 years	12·10 „ „
Infantile Death-rate ...	102·7 per 1,000 births.
Average Infantile Death-rate for last 10 years	87·91 „ „
Zymotic Death-rate ...	·72 per 1,000.
Respiratory Disease Death-rate...	1·44 „
Pulmonary Tuberculosis „ ...	·66 „
Other Tubercular Diseases „ ...	·22 „
Malignant Diseases (Cancer) ...	1·33 „
Inhabited houses in the Borough	3,974.
Area of the Borough including inland water	3,112 acres.

Beyond the compulsory notification of Pulmonary Tuberculosis, at the request of the Local Government Board, yet two other diseases have been added to the list of notifiable diseases—*i.e.*, Cerebro-Spinal Meningitis and Anterior Poliomyelitis. The former disease is commonly known as Spotted Fever, the latter as Infantile Paralysis.

The duties of the Sanitary Committee each year increase rapidly, and it is quite certain that the work entailed by the addition of these diseases to the already long list of diseases called Notifiable will increase the work of the Sanitary Officials enormously. Fortunately the Borough of Chelmsford has escaped any epidemic of Cerebro-Spinal Meningitis. As far as

my memory serves me, only one case has occurred in the Borough, and that in the autumn of 1909. However, in that autumn there were I know many cases of Anterior Poliomyelitis. In the early stages it is most difficult to arrive at a positive opinion as to which of these diseases is present. Probably a correct diagnosis can be made only by a Bacteriological Examination of the spinal fluid obtained by Lumbar puncture, made by an expert Bacteriologist. I am therefore glad to report that the Council have arranged with the Clinical Research Association to examine and report upon the spinal fluid taken from any such case that may occur. Beyond this, however, I would call attention to part of the Memorandum issued by the Local Government Board, which states "The sick should be isolated from the healthy, and if appropriate isolation and nursing cannot be obtained at home the patient should be treated in an Isolation Hospital." It is perfectly obvious, therefore, in my opinion, that immediate arrangements should be made with the Joint Hospital Board to take any cases of these diseases that may occur, because adequate isolation and proper nursing cannot be obtained in small houses and cottages. The advantage of prompt isolation and efficient nursing cannot be over estimated. If arrangements for the reception of either of these cases of disease are not made until any cases should develop then it is probable that by the time such arrangements are made all the advantages to be obtained by prompt isolation will be lost, to say nothing as to the detrimental effects that follow upon inadequate nursing.

Pulmonary Tuberculosis became a general Notifiable Disease at the beginning of the present year, by order of the Local Government Board. Previously it had been notifiable only in regard to those patients who were in receipt of parochial relief or those who were under Hospital treatment. It is now notifiable in all patients without distinction. I personally welcome this order, for I believe it is the first step towards directly reducing the large number of deaths that yearly occur, and ultimately removing this disease as a cause of death. But it is to be recollected that this is a step only towards the desired end. It now becomes the obvious duty of all communities to provide means whereby the sick can be isolated from the healthy, and that those who are the victims of this disease can be properly and adequately treated.

Personally, I should welcome an order whereby all those suffering from active Pulmonary Tuberculosis should be compelled to seek Sanatoria treatment. The cost of such a scheme would, I am afraid, prohibit it. However, I believe in the end it would prove to be the most economical course to follow.

At the present time in this Borough two Institutions deal with Tubercular patients, one, the Chelmsford Hospital and Dispensary, the other, the Workhouse Infirmary. Briefly summarised, the treatment offered at present to patients is Chelmsford Hospital.

Patients suffering from Pulmonary Tuberculosis for the most part are treated through the out-patient department. Patients who are suitable for admission as in-patients are occasionally received. No separate ward accommodation is offered. Therefore it is obvious that, taking the other patients into consideration, only a few cases can be received, and that for a limited space of time.

No actual treatment by the open-air method is permanently available. This Hospital serves, however, a much larger area than Chelmsford itself, and without doubt a large number of patients from the surrounding district are treated as out-patients, as well as a considerable number of patients residing in the Borough. No special department for the treatment of Tuberculosis has been created at the Hospital.

Chelmsford Workhouse Infirmary.

At this Institution two specially constructed shelters have been erected by the Guardians, each holding two patients, for the treatment of Pulmonary Tuberculosis. These shelters are available for suitable persons resident in the Union. Phthisical patients are also received into the Infirmary proper.

Public Health Department.

Under the various regulations dealing with Pulmonary Tuberculosis, all patients suffering from this disease must be notified within a given space of time. All cases notified are promptly visited, and where necessary advice is offered how best to avoid infection. Leaflets of advice are given, and when necessary disinfection is given free of charge.

In case of death, or when a patient removes, the house is disinfected. Arrangements have also been made whereby the expectoration of suspected patients can be bacteriologically examined to determine the presence of Tubercle Bacillus.

It is therefore painfully obvious that at the present time the treatment offered to patients suffering from this disease is extremely limited, and now that Pulmonary Tuberculosis is made compulsorily a Notifiable Disease it becomes obviously the duty of the Health Authorities to provide some treatment and assistance to those suffering from this disease. At the same time, a definite effort should be made to limit the number of those attacked year by year. To take this matter first, I would suggest :—

- (1) The adoption of a Bye-law prohibiting under a penalty expectoration in the streets of the Borough.
- (2) The provision of an Open-air School for delicate children.
- (3) That the Guardians be asked to give no out-relief to any poor person suffering from Consumption, but instead to offer every inducement to such person to enter the Infirmary for treatment. Where necessary out-relief should be given to any family after such patient has entered the Infirmary.
- (4) The regular and repeated examinations of all herds of cows supplying milk to or in the Borough for signs or symptoms of Tuberculosis by a competent Veterinary Inspector.

For those patients who are actually suffering from Pulmonary Tuberculosis I would recommend the establishment of (1) a Dispensary ; (2) Sanatoria. The Dispensary could probably be managed in conjunction with the out-patient department of the Chelmsford Hospital by financial arrangement with the Town Council. This Dispensary should be available for all persons suffering with this disease who for some reason or other might not be fit or able to go to a Sanatorium for regular and active treatment.

In regard to the establishment of Sanatoria, I would personally recommend that two at least should be considered and, if possible, established :—

- (1) Should be only for those cases who give promise of definite cure under treatment.
- (2) Should be for advanced cases only in which a definite cure is not probable, but where relief of symptoms only is attainable.

I should think probably in each case the best results and the ultimate greater economy would be attained if a central authority, such as the County Council, would erect such Institutions, and in which a certain number of beds could be allocated to the several Urban and Rural Councils of the County.

In each Sanatoria there then would be a resident specially selected Medical and Nursing Staff, who could give such individual attention as may be necessary to each case. Such institutions would, I believe, give the greatest comfort to the patients, and ultimately the best results economically and medically to the general public.

At the present time there is in this immediate neighbourhood considerable discussion and great difference of opinion as to whether any Sanatorium is necessary at all. The idea is advanced that any case of this disease at any stage of the disease can be treated and possibly cured by being placed in bed in a canvas shelter in any garden or open space. Without going into the merits or demerits of the "Shelter Treatment," I am of opinion that in the Borough of Chelmsford it is not the best means of treating the general run of cases of Pulmonary Tuberculosis that occur. The gardens generally in the Borough attached to the cottages and smaller houses are limited in size ; in fact, often there is no garden, only a back yard, that the erection even of a Shelter would be impossible. Again, the situation of many gardens would, in my opinion, contra indicate the possibility of any good result being attained in such localities. If, however, it is admitted that there are certain localities in the Borough where Shelters could be erected if necessary, I am of opinion such patients would do better to go to a properly-equipped Sanatorium, with an efficient Medical and Nursing Staff. The question whether this Sanatorium shall be built of bricks and mortar or of wood and canvas matters little as far as this report is concerned.

Under the Insurance Act which is to come into force in July of this year I believe there is a provision that each Local Health Authority shall make some definite provision for the treatment of Pulmonary Tuberculosis. The time, therefore, is short before this Act comes into force. I would therefore urge that this question should be at once considered fully, and arrangements made at once for the active and efficient treatment of this disease.

Births.

The total number of Births registered in the Borough during the year was 370—190 males, 180 females. This gives a birth-rate for the year of 20·54 per 1,000 as against 18·98 in 1910 and 18·45 in 1909. The improvement in the Birth-rate this year of 1·56 per 1,000 over last year is definite but it is really very slight. For years the Chelmsford Birth-rate has been about 5 per 1,000 below the average birth-rate of the whole country. This Birth-rate of 1911 is, I believe, about 3 per 1,000 less than the average Birth-rate recorded in the Borough during the past 10 years. It appears to be held here in the Borough that the decrease in the Birth-rate is due (1) to the increased cost of living, (2) to the difficulty in getting houses of an adequate size and rental, (3) to parents of both sexes declining to undertake parental responsibility. These causes, I believe, exist equally in other towns, especially those towns suburban in character. It is scarcely probable that any Sanitary Authority can deal with the first and the third suggested cause, but it is possible for such authorities to deal with the second cause.

Deaths.

During the past year the total number of Deaths registered in the Borough from all causes was 245, this number with 12 deaths of residents who died outside the Borough brings the total deaths to 257 and gives a gross death-rate of 14·27 per 1,000. Of these deaths 41 were aliens, this reduces the total deaths to 211 and gives a nett death-rate of 12·00 per 1,000. This is the highest Death-rate recorded since 1906, but is yet slightly below the average Death-rate of the past 10 years. I believe it will be found that the general Death-rate throughout the whole country will this year show a considerable increase and that in comparison, the Chelmsford Death-rate will be considered a very satisfactory one.

The ages at Death of those resident in the Borough (excluding aliens) were :—

38 or 18 per cent. were under 1 year of age.					
5 or 2·4	„	were over 1 and under 2 years of age.			
1 or ·4	„	2	„	5	„
6 or 2·7	„	5	„	15	„
6 or 3·7	„	15	„	25	„
14 or 6·4	„	25	„	45	„
42 or 20	„	45	„	65	„
101 or 47·5 „ were over 65 years of age.					

In regard to (Causes of Death) Table III. :—

- 14 or 6·56 per cent. were due to Congenital Causes.
- 7 or 3·28 per cent. were due to Zymotic Diseases.
- 16 or 7·5 per cent. were due to Tubercular Diseases.
- 26 or 12 per cent. were due to Bronchitis and Pneumonia.
- 24 or 11·5 per cent. were due to Cancer and all forms of Malignant Disease.
- 28 or 12·5 per cent. were due to Senile Decay.
- 73 or 34 per cent. were due to other forms of defined diseases not classified.

It will be seen from the above that 16 deaths or 7·5 per cent. of all the deaths registered in the Borough have been due to Tuberculosis (all forms included), of these 12 were due to the Pulmonary type, commonly called Consumption. The deaths due to this disease in the Borough during the past ten years are :—

	1911	1910	1909	1908	1907	1906	1905	1904	1903	1902
Deaths...	12	11	13	9	12	11	9	13	11	10
Rate per										
1,000 ..	·66	·60	·73	·44	·87	·81	·67	·94	·84	·75

This gives an average of 11·1 deaths per annum and an average Phthisis death-rate of ·73 per 1,000. This return shows very definitely one thing, *i.e.*, that Pulmonary Tuberculosis has practically not increased during the past decade and that the actual death-rate from this disease has decreased slightly, I should think that taking these figures in comparison with similar rates from other towns throughout the country it would be found that Chelmsford would compare very favourably in regard to Tuberculosis in general and Pulmonary

Tuberculosis in particular. Colchester for instance, for the year 1910, had a death-rate of 1.06 from this disease.

Cancer.

I greatly regret to have to record 24 deaths during the past year from Cancer, that is from Malignant Disease of all kinds. As far as I am able to ascertain this is by far the largest number of deaths recorded in any year from this form of disease in the Borough. The death-rate from this disease is therefore 1.33 per 1,000. I am quite unable to give any explanation for this exceptionally high death-rate and I hope most sincerely that in the future we shall experience a very great improvement in this respect. As far as is known at the present time no form of Cancer is either infectious or contagious and, therefore, from the sanitary point of view we know nothing as to how this disease arises and equally there is nothing known as to prevention. The only thing that can be done is done, *i.e.*, after death cleansing and disinfection which is done in all cases. Careful attention is directed in regard to the so called "Cancer houses"; to my knowledge no such house exists in the Borough. I am, however, informed that it is frequently difficult to let a house in which death from cancer has occurred recently: one such instance has recently come under my own observation. Again this year the majority of these cancer deaths occurred in regard to this disease affecting some part of the Alimentary Canal. I have in some previous years given a full detailed list in regard to these deaths. I feel, however, that no good can follow this routine, and this year I refrain from doing so.

Infantile Mortality.

The infantile mortality this year has been exceptionally high, 38 deaths of infants under one year of age having been registered. This gives an Infantile Death-rate of 102.7 per 1,000 births, the highest Infantile Death-rate recorded since 1906, and in point of numbers alone the highest since 1901. It will be seen from Table IV., Diarrhœa, Premature Birth, Atrophy, Bronchitis, and Pneumonia have been the chief factors in causing this high death roll. The exceptionally hot and dry summer undoubtedly was directly the cause of many deaths. The infantile mortality has been so exceptionally low in the immediate past that this year's return may seem to many exceptionally high. That, however, is not so, I expect it will

be seen that the Infantile Death-rate compares very favourably with this death-rate in other towns. Even so this death-rate is to be deplored, I cannot but feel that many of these deaths were under conditions absolutely preventible. I think that the majority of the deaths under the headings Diarrhœa, Atrophy, Bronchitis, and Pneumonia would be prevented if these children could have all been treated under ideal conditions that unfortunately do not exist in many cottages. I, however, feel very strongly that there should be some hospital arrangement made whereby children suffering acutely from either Diarrhœa or Atrophy or Bronchitis could be admitted without difficulty and also without payment. Such cases usually would not remain long in hospital and their lives would I believe be saved without any great cost to the community. Such cases are usually acute and frequently arise from defective feeding in insanitary conditions, surely it should be the duty of the Sanitary Authority again here to provide treatment to save life. From past experience I well know how difficult it is to make many of these mothers understand the first essentials of cleanliness and again how frequently useless it is to try and persuade the mothers the dietary errors they subject their infants to. I believe a children's ward attached to any hospital for the reception of these cases would do more to educate mothers and to save infantile lives than all the sanitary officials possible. One thing, I do believe, and that is speaking generally mothers do try more to prevent contamination of milk by flies than they did formerly. This year I had freely circulated pamphlets bearing on this question. Also during the very hot weather in August and September the collection of house refuse from all the cottages and the yards was more regularly and more frequently carried out.

Zymotic Diseases.

I regret to report that the deaths from Zymotic Diseases this year far exceed in number those in the three previous years. In all 13 deaths have been registered from the Zymotic diseases. This gives a Zymotic death-rate of $\cdot 72$ per 1,000.

The Zymotic death-rate per 1,000 for the past ten years has been—

1911.	1910.	1909.	1908.	1907.	1906.	1905.	1904.	1903.	1902.
$\cdot 72$	$\cdot 21$	$\cdot 34$	$\cdot 44$	1.18	$\cdot 82$	$\cdot 84$	1.61	$\cdot 86$	2.94

This death-rate of .72 per 1,000 looks a heavy death-rate only if compared with the death-rate of the three preceding years. I believe it will be found to be very light in comparison with the corresponding death-rate of other towns. This year we have had seven cases of Enteric Fever notified; of these three cases died; of these two were practically aliens to the Borough. They acquired the disease in other districts, and were brought here to be nursed; of these one lived only a few days. The other death from this disease had been nursed at home for some time before the disease was recognised. He was taken into the Hospital and died also in a few days. In no instance was it possible to trace the infection. In one instance only was there any history of shell fish having been taken, and that could not be definitely proved. No provision has yet been made for the reception of cases of Enteric Fever into the Isolation Hospital.

Many more cases of Erysipelas this year have had a fatal termination than is usual in proportion to the number of cases notified. Four deaths this year have been certified from this disease; of these two were infants under one year of age. These cases must have been exceptionally virulent, as no other cause of death was given as a complicating cause.

Presumably owing to the very hot and dry summer, Infantile Diarrhoea was for a short time very prevalent in the Borough, and six deaths were caused by this disease all in children under one year of age. I believe I am correct in saying only one of these children was breast fed.

I am glad to report that no deaths have been caused by Measles, Scarlet Fever or Diphtheria. The Borough during the year was much freer from Measles than usual.

Notifiable Infectious Diseases.

The cases of Infectious Disease notified during the year are tabulated on Table II. I regret to report that in all 113 notifications have been received as against 39 cases only in the preceding year. The distribution of these cases has been singularly even, 46 notifications being received from the North and South Wards, 21 from Springfield. Of these cases 66 were removed to Hospital for isolation and treatment, a fact which speaks for itself in regard to the feeling of the parents and patients in regard to the Isolation Hospital. It

is rare indeed to hear one single complaint in regard to this Hospital. From the appended table it will be seen that Notifiable diseases were much more prevalent during the latter half of the year. From May up to December Scarlet Fever was present in the Borough, and especially so during October and November.

The months in which these cases were notified were:—

	Scarlet Fever.		Diphtheria.		Typhoid Fever.		Erysipelas.	Pulmonary Tuberculosis.		Puerperal Fever.
Jan.	...	1	...	7	...	—	...	—	...	—
Feb.	...	—	...	2	...	—	...	1	...	—
March	...	1	...	—	...	—	...	1	...	1
April	...	—	...	—	...	—	...	2	...	—
May	...	4	...	—	...	—	...	1	...	9
June	...	1	...	—	...	1	...	—	...	2
July	...	4	...	1	...	—	...	—	...	1
Aug.	...	4	...	2	...	1	...	—	...	—
Sept.	...	7	...	1	...	2	...	2	...	—
Oct.	...	14	...	1	...	1	...	1	...	—
Nov.	...	14	...	1	...	1	...	—	...	1
Dec.	...	1	...	9	...	1	...	2	...	1

Scarlet Fever during October and November was almost an epidemic. These cases arose practically from the Victoria Schools, and were due to one boy and one girl going to School in a peeling state. The fact that these children had had Scarlet Fever escaped recognition entirely by their parents, and it was only after much trouble that these cases were discovered. The boy when discovered was then peeling only on his feet. Isolation of these children and immediate closure of the Schools at once stopped this outbreak.

The Diphtheria cases at the commencement of the year was the continuation of the outbreak reported on by me last year, due to an infected Milk Supply. The cases notified in December were confined to a very small area in Springfield Ward, and were due, in my opinion, to two children, having developed the disease, being allowed to mix with others, and were not recognised until after they had infected others.

Of the cases of Enteric Fever notified four were imported cases received into the Borough for treatment, and two of these cases terminated fatally. In regard to the three remaining cases, the cause of one was probably due to shellfish. In the other two cases I was unable to ascertain any cause.

House Accommodation.

The number of inhabited houses in the Borough of Chelmsford, as far as I can gather from information supplied me by the courtesy of the Registrars of Chelmsford and Springfield, is: Chelmsford, including Waterhouse Estate, 3,258; Springfield (Urban), inhabited houses 716; uninhabited 23, building 9. These figures refer to the census figures taken last year. Therefore the number of inhabited houses in the whole of the Borough at the last census was 3,974. This, with the census population of 18,008, gives an average of 4·5 persons to each house. However, the Borough Surveyor informs me that during the year 1911 completion certificates were given for 66 houses, so that it is obvious now that there are more than 4,000 inhabited houses in the Borough. Yet there is still a great demand for houses, especially for cottages, and I have not the slightest reason to doubt that if 100 cottages could be built at once they would be occupied practically before they were finished. That the Borough will increase very rapidly during the next decade is not to be doubted. It is expected that Messrs. Hoffmann, Ltd., will in the near future considerably extend their already large works. The Marconi's Wireless Telegraph Co., Ltd., have purchased the Cricket Field for the erection there of a large manufactory. In each instance this must mean a large increase of employees, and consequently an increased demand for cottages. At the present time to my knowledge some of the larger cottages are now accommodating two families, which must inevitably, sooner or later, lead to overcrowding. I am glad to be in a position to state that the Council are completing negotiations for the purchase of $6\frac{1}{4}$ acres of land off the Rainsford Lane for the purpose of erecting Workmen's Dwellings, and the Borough Engineer has prepared a scheme for laying out the land, including the erection of 143 cottages, at rents of 4s., 5s., and 6s. a week, at a cost of £23,000 approximately. The Council have adopted the first portion of the scheme, and applied to the Local Government Board for a loan of £7,364 for the purchase of the land and the erection of 38 cottages. I hope it may be found possible under this scheme to provide proper baths to these cottages. They are in these days an absolute necessity, especially as in Chelmsford at the present time there are no public baths where a proper bath can be obtained.

The Inspector of Nuisances has given as much time as possible to house inspections. The general and sanitary condition of the houses in the courts and yards of the Borough have been carefully watched. No serious nuisance has been discovered. Any nuisances that have been detected have been dealt with immediately.

Sewerage and Drainage.

A new sewer has been laid in Cherry Garden Lane. The sewer in Tower Avenue has been completed, and many repairs to existing sewers have been carried out. Difficulties have occurred in regard to the drainage of Bishop's Hall which formerly drained into the river. I hope these difficulties have now been satisfactorily overcome. The Springfield Mill drainage which also discharged into the river has been under discussion. This work is now in hand, and will, I hope, soon be completed, so that in the future no further pollution of the river will be possible.

The Sewage Farm, I am informed, still works satisfactorily, but in view of the expansion of the population and the increased number of houses, I am of opinion that before long it will be found necessary either to increase the acreage of this farm, or to treat a portion of the sewage by some other method. In my last report on the subject of sewer ventilation, I expressed the hope that each new sewer as it is laid should be properly ventilated, for I am still of opinion that the ventilation of the sewers in the Borough is inadequate.

Each year a great amount of attention is paid to giving a proper supply of water to each w.c. I hope I may in time be able to report that there are no more hand flushed w.c.'s in the Borough. There are still a few privies in quite the rural part of Springfield, that at the present moment it is thought not necessary to replace with w.c.'s. In other respects the sewerage and drainage throughout the Borough is in a satisfactory condition.

There is a matter in regard to the main sewers of the Borough I should like to mention, and it is a matter that I speak of with some hesitation. I fear it is probable before long that these main sewers will be found incompetent to carry the increasing amount of sewage due to the growth of the Borough population. As I understand these sewers were

constructed nearly 50 years ago, when the population of the Borough was approximately half what it is now. Mr. Alderman Chancellor is able to give all details in regard to this question, for I believe he was to a very considerable degree interested in the construction of the system of sewerage. I suggest that the carrying capacity and general condition of those main sewers should be ascertained, for whilst they might easily carry the sewage from a population of under 8,000, yet it is very possible they may not carry the sewage from a population of more than double that number.

Removal and Disposal of House Refuse.

The removal of house refuse in Chelmsford itself is done by the Council under the direction and supervision of the Borough Engineer. In Springfield Ward this work is done by contract. The refuse is wholly and entirely "tipped" on sites approved by the Council. I have this year received no complaints in regard to this work.

In my report for last year I mentioned that plans for a refuse destructor had been submitted to and approved by the Rural District Council.

This destructor has been erected just outside the Borough Boundary on the Roxwell Road, some 450 yards beyond the Admiral's Park Water Tower. It has been erected by private enterprise, and has been working now about 9 months. I am informed by the Borough Engineer that approximately 3,300 loads of house refuse have been dealt with through this destructor. I have naturally received complaints in regard to this so-called destructor from those living in proximity. I am quite in accord with the complaints I have received, but as this building is outside the Borough, I feel I have no *locus standi* in this matter. As the Rural District have not any inhabited houses within many hundreds of yards, it is natural they have received no complaints in regard to this destructor.

I have made suggestions to the Sanitary Committee which, if carried out, would, I believe to some extent, obviate the nuisances complained of. I believe these suggestions have been communicated to the owners, who will, I hope, adopt them, and so help to mitigate these nuisances.

Over and above the quantity supplied to this destructor, about 2,100 loads of refuse have been tipped as before at Widford.

It must be obvious that as the Borough increases, the amount of house refuse must increase. I believe it is possible that the owners of the destructor may not require so many loads of refuse in the near future; also it is probable that before long the site for tipping refuse at Widford may not be available.

I therefore feel that it is my duty again to urge the Council to thoroughly consider the advisability of building a destructor that is efficient to consume all the Borough refuse, and so do away with a nuisance that is positive in character to many of the Burgesses. In urging this, I feel my opinion is contrary to that of many members of the Council, but I still feel very strongly that the quick removal and efficient disposal of house refuse is a matter of the greatest importance to an increasing and thriving community. Equally I am of opinion that to do this properly an efficient destructor should be built.

I would here suggest that the removal of house refuse throughout the Borough should be more frequently performed. It is, as far as possible, now done from house-to-house once a week. I have frequently been informed that longer intervals elapse in some districts. In some instances I have been told this work is done only once a fortnight. It must be obvious this interval is too long, especially so in regard to the smaller houses. House refuse not collected and removed at very regular intervals becomes a very active and dangerous nuisance, especially in the hot weather. I would suggest that during the summer months especially, the house refuse throughout the whole Borough should be regularly removed and disposed of at least twice a week.

Nuisances. Proceedings for Abatement, Etc.

Again I am glad to report that no nuisance of any definite or serious character has been reported as arising in the Borough this year. The only official and definite complaint received by me has been in regard to the before mentioned Refuse Destructor. I trust the suggestions I have made in regard to this may mitigate the nuisance complained of.

Water Supply.

The Borough Water Supply is still derived from the three sources which I have reported upon now for so many years, *i.e.* :—

1. Deep well, Mildmay Road Yard.
2. Burgess Well.
3. Admiral's Park Well.

The water supply to Springfield is still derived from the Rural District Council's Well, Great Baddow.

The average daily supply from the three Borough Wells has this year been 256,000 gallons, the Mildmay Yard Well averaging 114,000 gallons, Burgess Well 60,000 gallons, and Admiral's Park Well 81,500 gallons. Considering the exceedingly dry summer I am of opinion this average is an excellent one, and I am agreeably surprised that this average has been maintained. I am pleased to report that the quality of these waters continues to be extremely good. By desire of some members of the Sanitary Committee I submitted a sample of water from each well to Dr. Bernard Dyer, the County Analyst, for chemical and bacteriological examination. I attach herewith his full report of each water :—

28th April, 1911.

“ The results are given in grains per gallon :—

	Mildmay Road Deep Well.	Admiral's Park.	Burgess Well.
Total Dissolved Matter ...	75·60	33·04	35·84
Loss on Incineration of Residue ...	4·48	2·24	1·68
Chlorine in Chlorides ...	23·10	2·10	2·20
(Equal to Chloride of Sodium) ...	(38·07)	(3·46)	(3·63)
Nitrogen in Nitrates ...	inappreciable	·52	·86
(Equal to Nitric Acid) ...	—	(2·01)	(3·33)
Free (actual or saline) Ammonia ...	·019	·001	·001
Albuminoid (organic) Am- monia ...	·001	·001	·001
Oxygen absorbed by Oxidisable Organic Matter, &c., from a solution of Permanganate of Potash at a tempera-			

	Mildmay Road Deep Well.	Admiral's Park.	Burgess Well.
ture of 80° Fahrenheit :—			
In 15 minutes ...	·016	·005	·005
In 4 hours ...	·038	·013	·011
Phosphoric Acid ...	Traces	Traces	Traces
Appearance in 2 feet tube...	Clear	Clear	Clear

“ MILD MAY ROAD DEEP WELL.

“ The bacteriological character of this water is satisfactory.

“ ADMIRAL'S PARK.

“ This water contains but little organic matter, and its bacteriological condition is quite satisfactory.

“ BURGESS WELL.

“ As I have found on previous occasions, the water of this well is rather high in nitrates, derived originally from land drainage. The bacteriological condition of the water, however, is highly satisfactory.”

I have since the date of Dr. Dyer's report analysed these waters on three occasions ; the chemical results are practically identical, the only exception being that the amount of nitrogen as nitrates in the Burgess Well water has diminished.

Again, therefore, the quality of the Borough Water Supply can give rise to no adverse comment ; the only cause for anxiety is the quantity available for ordinary daily consumption.

In my previous report I stated that it was proposed to sink another well between Long Stomps Reservoir and Galleywood. This work is now in progress. The Borough Engineer informs me “ that a nine-inch bore is being sunk and a depth of 400 feet has been attained. The London Clay is thicker here than was anticipated but the end of it appears now to have been reached.” I sincerely hope this may be so and I trust this borehole will be found to yield the amount anticipated, *i.e.*, 100,000 gallons daily. It is now, to everyone, quite obvious that a very considerable daily additional supply of water is absolutely necessary for the welfare of the Borough. I doubt if the 100,000 gallons it is hoped to get from this new well will be sufficient for more than a limited space

of time, for I understand the yield from the Mildmay Yard well has appreciably diminished, though this to some extent may be due to a defective pump. It is, however, quite certain that this well has not yielded the daily amount of water expected of it.

In regard to Burgess Well and Admiral's Park Well valuable as they have been in the past, and in fact they still are essential for the Borough Water Supply, yet the fact cannot be overlooked that they are both shallow wells and as such are more liable to accidental contamination than deep wells are. In my opinion these wells should be regarded more in the light of auxiliary wells and not as they now are part of the source from which our daily supply of water is derived.

The fact still remains that the Borough at present has absolutely no reserve water supply and should any accident happen to the deep well in Mildmay Yard, situated as we are to-day, we should be reduced almost to a water famine.

I am glad to report that practically a constant service of water is maintained throughout the Borough.

Rivers in the Borough. Pollutions, &c.

I reported briefly last year on the rivers in the Borough, *i.e.*, Chelmer and Wid. The condition of these rivers shews, in my opinion, no improvement. As far as I know, nothing has been done to obviate the pollution of the Chelmer, which undoubtedly occurs outside the Borough boundary. In order to obtain an analysis of the water in the Chelmer under the best possible conditions, I sent Dr. Bernard Dyer a sample for analysis in June last, when there had been no rainfall for 18 days. As I understand, some exception was taken to the previous analysis on account of flood water then present. I append Dr. Dyer's report and observations:—

19th June, 1911.

SAMPLE TAKEN FROM RIVER AT BOROUGH BOUNDARY, ON 8TH
JUNE, 1911.

		Grains per Gallon.
Total Dissolved Matter	... ..	29·12
Loss on Incineration of Residue	..	2·80
Chlorine in Chlorides	... ..	2·30
(Equal to Chloride of Sodium)	... ..	(3·79)

			Grains per Gallon.
Nitrogen in Nitrates	...	...	·09
(Equal to Nitric Acid)	...	...	(·35)
Free (actual or saline) Ammonia	...	...	·019
Albuminoid (organic) Ammonia	...	...	·018
Oxygen absorbed by Oxidisable Organic Matter, &c., from a solution of Permanganate of Potash at a temperature of 80° Fahrenheit—			
In 15 minutes	...	...	·084
In 4 hours	...	...	·154
Phosphoric Acid	...	...	heavy traces
Appearance in 2 feet Tube	...	...	turbid

“ This is very unclean water. The high proportions of
“ free and albuminoid ammonia indicate sewage or like
“ contamination, and the figures indicating oxidisable
“ organic matter are high. The microscope shows a good
“ deal of decaying organic matter and many living infusoria.
“ The bacteriological examination, however, gives better
“ results than on previous occasions when the water was
“ taken after heavy rain, although it still indicates the
“ presence of organisms commonly associated with faecal
“ pollution.”

The pollution of the rivers from within the Borough is being very materially reduced, and will, I hope, be shortly reduced to a minimum. The drainage from Bishop's Hall and Springfield Mills is now being diverted, so that I trust these sources of pollution will shortly be removed entirely. I believe, however, that nothing yet has been done to obviate pollution from the surface water drains in Springfield and in Rectory Lane.

I still regard the pollution of the River Chelmer seriously in connection with the Swimming Bath. The possibility of serious pollution and the evil consequences arising therefrom must be borne constantly in mind. However frequently the bath is refilled the possibility of serious pollution must be recognised. I herewith append a full report of the analysis of this bath water made by Dr. Bernard Dyer in June last, three days after the bath had been re-filled :—

19th June, 1911.

“SAMPLE TAKEN FROM CHELMSFORD SWIMMING BATH ON 12TH
JUNE, 1911.

		Grains per Gallon.
Total Dissolved Matter	... ..	29·12
Loss on Incineration of Residue	... ..	2·80
Chlorine in Chlorides	... ..	2·50
(Equal to Chloride of Sodium)	... ..	(4·12)
Nitrogen in Nitrates	... ..	·12
(Equal to Nitric Acid)...	... ..	(·44)
Free (actual or saline) Ammonia	... ..	·001
Albuminoid (organic) Ammonia	... ..	·015
Oxygen absorbed by Oxidisable Organic Matter, &c., from a solution of Per- manganate of Potash at a Tem- perature of 80° Fahrenheit—		
In 15 minutes	... ..	·061
In 4 hours	... ..	·144
Phosphoric Acid	... ..	heavy traces
Appearance in 2 feet tube—turbid, but less so than the river water		

“This water, which I understand has been filtered
“since it came from the river, is less impure than the
“river water, but it contains a high proportion of oxidis-
“able organic matter. The microscope shows compara-
“tively few of the floating particles found in the river
“water, but a good many large infusoria. The bacterio-
“logical condition has been improved by the filtration,
“but bacteria associated with sewage (*B. coli communis*)
“are still evident in as little as one cubic centimetre of
“the water. For merely bathing purposes the water
“compares favourably with the unfiltered river water, but
“the filtration is nevertheless evidently imperfect, and
“bathers should be cautioned against allowing themselves
“to swallow the water.”

In the autumn of 1910 I called attention to the condition of this bath water, and pointed out the possibility of danger arising. At that time the water passed into the bath unfiltered, since then filtration by sand filters has been again adopted. Comparison in the analyses will show that improvement is effected by filtration, but I am still of opinion that filtration

through a sand filter does not effect a complete freedom from danger.

It is with very great diffidence that I offer any criticism upon this swimming bath, for I fully recognize its immense value to the Borough, and I should very much regret if any observations of mine should in any way injure its popularity. Yet as Medical Officer of Health I feel I should be failing in my duty if I did not point out any possibility of danger that I believed to exist. It will at once be asked what solution can be offered to the difficulty? The only answer I can see is (1) an improved method of filtration, or (2) to acquire another source of water supply. Both methods are open to objection, the chief of which is the question of expense. To establish a system of filtration that would efficiently and thoroughly filter this water would not cost much less than £1,000 I understand. I very much doubt if it would cost much less to provide another water supply that would be adequate, for at the present time it is quite certain that the ordinary water supply to the Borough could not provide the amount of water necessary to run this bath throughout the summer. I think that the better plan by far would be, if it is possible, to have the river water chemically treated and filtered; the initial cost once covered, such a filter would cost very little to keep in order, and the filter itself would last for a very long time.

Dairies, Cowsheds and Milkshops.

This year the Dairies, Cowsheds and Milkshops in the Borough have again received careful and special attention. A sample of milk has been again taken for examination from every dairy supplying milk in the Borough. These samples were sent to the Clinical Research Association for examination. This method is adopted to find out as far as possible the presence of disease, and also to determine the presence of dirt, *i.e.*, faecal matter in the milk. In all 29 samples were submitted for examination. The result was quite satisfactory, and certainly it is a matter for congratulation. Taken as a whole it shows that there is a definite improvement in regard to the absence of dirt in the milk supplies to the Borough. Further it is a matter for congratulation that no specimen showed direct evidence of disease.

Your Dairies and Cowsheds Sub-Committee did not, I am sorry to say, make their usual annual visit of inspection to the Dairies and Cowsheds in the Borough. I feel that this visit of inspection always produces a definite amount of good, *i.e.*, especially in regard to cleanliness. It is possible that the knowledge of this visitation may by some means become known, and that the cows and cowsheds have received extra care previous to the visit; even so it does good, and I hope the visit may be renewed.

Last year I reported somewhat fully my views regarding the keeping of cows in a condition of absolute cleanliness, and also the necessity of the hands of the men milking being clean; it is not therefore necessary to go over this question again. I should, however, like once more to point out how important, in my opinion, it is that all cows attached to any dairy sending milk for sale into the Borough should be free from all diseases, especially from Tuberculosis. I still urge that a fully qualified veterinary surgeon should be appointed to examine each dairy and each cow attached to such dairy, and to report directly to the Council the presence of any cow showing evidence of disease. Any cow showing positive evidence of Tuberculosis should be at once excluded from the dairy. I would suggest also that the Veterinary Inspector should be empowered to give a Certificate to the owner of such dairy in which it was found that the cows exhibited no evidence of disease, and that this Certificate might be signed also by the Medical Officer of Health. In this way the general public could feel assured that their milk supply was wholesome and pure. I feel this also that it would "pay" the owner of any dairy to keep cows only that were free from disease, for it is certain that the public would quickly decide to use only the milk derived from a dairy that was certified to be free from disease. I feel sure with equal certainty that they would decline to buy their milk from any dairy that did not show this "Certificate of Health." To be of any real use it would be of course necessary to make regular inspections of these dairies at least four times a year.

It will be at once raised as an objection to this course: What is the use of the inspection when probably two-thirds of all the milk consumed in the Borough comes from outside the Borough where no such inspections are made? In answer to that I think that probably in a very short space of time those

keeping dairies outside would very quickly see the value of the inspection and subsequent certificate. They would see how the absence of such certificate would adversely affect their business. I therefore think they would quickly fall into line and ask that their cows should be equally examined. The one possible objection to such a course might be the expense if any question of compensation arose. Such question might possibly be discussed and dealt with on its merits. But I firmly believe that if one dairyman took the risk attached to such an examination as I propose and if a certificate was granted the demand for this particular milk would be such that other dairy-men would be compelled to get a similar certificate otherwise they would lose their business.

Housing and Town Planning Act.

Under this Act 235 houses only have been inspected during the year under review. I much regret to report so little work done under this Act. Owing to the prevalence of infectious disease more or less throughout the year, the Inspector of Nuisances informs me his time has been very much occupied with the work in connection therewith. I trust to be able to give better results during the present year. No houses have been found unfit for habitation during the past year.

Places over which the Council have supervision.

LODGING HOUSES.

There are still two only in the Borough. They are regularly inspected each month. They have always been found to be clean and well conducted.

SLAUGHTERHOUSES.

Again these have been regularly inspected. All have been found to be kept clean, all are well lighted, ventilated, and drained. I again suggest that the consideration of a Public Abattoir is to be desired; especially so now that the treatment of Tuberculosis is so much under discussion. With a Public Abattoir all animals killed would be examined before the meat would be exposed for sale. In this way any animal affected with tuberculosis could be excluded from becoming food for man.

BAKEHOUSES.

These also are subject to frequent and regular visits. All are clean, well ventilated, and well kept. There is still one underground bakehouse in the Borough.

The Market

The Chelmsford Cattle Market is regularly inspected by the Borough Veterinary Surgeon, Mr. Mulvey, F.R.C.V.S., and the Inspector of Nuisances. I am glad to say that the general quality of the cattle sent into the Market has been maintained. The number of diseased animals detected has been quite small. No prosecutions have been taken in regard to those diseased animals detected; they were either withdrawn from the Market at once, and slaughtered in the knacker's yard, or taken back to their owner's farm and the Sanitary Authority of that district notified. It has been suggested that the Veterinary Surgeon and myself should seize and destroy all animals sent into the Market which show even signs of disease. I am of opinion that such action would be resented very strongly and would become before long very expensive. At the present time I think it would be much better to continue much on the same lines as we have been doing in the past two years, *i.e.*, to seize and destroy animals that are without question diseased and exclude from the Market those cases that are doubtful and communicate with the Sanitary Authority of the district they come from.

The Public Elementary Schools.

All the Public Elementary Schools in the Borough are inspected by myself regularly, and the Inspector of Nuisances frequently and regularly inspects the lavatories, and disinfects all the Schools during each vacation. It is with great pleasure that I report upon the general excellence of the new Council Schools in Trinity Road, Springfield. They are quite palatial in character, the situation is excellent, the heating and ventilation is at present beyond reproach, and the lighting, except in the girls' assembly hall, but I do not quite see how this could have been improved upon. I have pointed out in my report on the Medical Inspection of the Schools some defects that are I think obvious, and also stated that I considered the surface of the playgrounds quite good. I would

however modify this, for I noticed at my last visit here that the surface is becoming very broken and will before long necessitate either repair or renewal. Possibly the very severe weather might have in part caused this or at any rate assisted to cause it.

I am also very pleased indeed by the improvements effected in the Friars Schools. In all respects they have been re-modelled and brought up-to-date.

I am glad to hear that plans have been prepared to remodel the Victoria Girls' and Infants' Schools. I trust this work will be completed during this current year. With the improvement to be effected here I hope that the playground will be enlarged and also that adequate space will be provided for the Cloak Rooms.

I have made suggestions also in regard to Victoria Boys' Schools that I trust will soon be considered.

I regret that no consideration has been given to my suggestions in regard to establishing baths in the Schools. I admit that the condition of the children in regard to cleanliness has improved, due, I believe, entirely to the Medical Inspection; but I still think School baths would be a great benefit.

In consequence of the prevalence of Measles I had to advise that the Infants' department of the Friars Council School should be closed for 14 days.

In November last I advised that the Victoria Boys', Girls', and Infants' Schools should be closed for eight days. I found, after much trouble, one boy and one girl had been attending these Schools during the process of desquamation. With the closure of the schools and the isolation of these two cases I ceased to receive notification of this disease.

Methods of Dealing with Infectious Diseases.

They remain unchanged. I have on many occasions reported upon the methods adopted.

Isolation Hospitals.

Again I report no alteration. The Hospital in Baddow Road can accommodate 14 Scarlet Fever cases and 7 Diphtheria cases. Tents are erected to meet any emergencies. At the

time of writing there are, I believe, three tents full of cases, over and above those accommodated in the wards. It is obvious that enlargement is necessary. The Small-pox Hospital at Galleywood is used only for convalescent Scarlet Fever Patients.

Again I am sorry to report that no provision has been made for the reception of cases of Typhoid Fever. Now that Cerebro-Spinal Fever and Anterior Poliomyelitis have been added to the list of diseases that must be isolated, it must become a matter of necessity, I think, to enlarge this Hospital. I hope unnecessary delay will be avoided, and that accommodation will be also provided for Scarlet Fever, Diphtheria, Typhoid Fever, Cerebro-Spinal Fever, and Anterior Poliomyelitis.

Improvements in Progress or Required.

1. An additional and reserve Water Supply.
2. An efficient Refuse Destructor, with more frequent and regular removal of house refuse.
3. Extension of Isolation Hospital.
4. Provision of Sanatorium for cases of Pulmonary Tuberculosis.
5. Dispensary for cases of Tuberculosis.
6. Purification of Rivers entering the Borough, especially River Chelmer.
7. Appointment of Veterinary Inspector to examine all Cows from which the Borough Milk Supply is derived.
8. Erection of Cottages and Workmen's Dwellings.

I have the honor to be, Gentlemen,

Your Obedient Servant,

H. W. NEWTON,

Medical Officer of Health.

TABLE I.

Borough of Chelmsford.

VITAL STATISTICS OF WHOLE DISTRICT DURING 1911 AND PREVIOUS YEARS.

Y EAR.	Population estimated to Middle of each Year.	BIRTHS.			TOTAL DEATHS REGISTERED IN THE DISTRICT.		TRANSFERRABLE DEATHS.		NETT DEATHS BELONGING TO THE DISTRICT.			
		Un-corrected Number.	Nett.		Number.	Rate.	of Non-residents registered in the District.	of Residents not registered in the District.	Under 1 year of age			
			Number.	Rate.					Number.	Rate per 1,000 Net Births.		
1	2	3	4	5	6	7	8	9	10	11	12	13
1906	13,500	266	—	19.70	231	17.10	42	—	36	135.33	189	14.00
1907	13,750	300	—	21.81	192	13.96	62	—	18	60.00	130	9.40
1908	17,200	339	—	22.93	232	13.35	51	—	27	67.61	181	10.53
1909	17,500	323	—	18.45	181	10.34	40	—	17	52.51	141	8.05
1910	17,800	338	—	18.98	202	12.47	34	—	17	50.29	168	9.43
1911	18,008	370	370	20.54	257	14.27	41	12	38	102.7	216	12.00

Area of District in acres (exclusive of area covered by water), 3,015.

Total population at all ages, 18,008
Number of Inhabited Houses, 3,974
Average number of persons per house, 4.5

At Census of 1911

TABLE II.

BOROUGH OF CHELMSFORD.

CASES OF INFECTIOUS DISEASE NOTIFIED DURING THE YEAR, 1911.

NOTIFIABLE DISEASE.	NUMBER OF CASES NOTIFIED.							TOTAL CASES NOTIFIED IN EACH LOCALITY (e.g. Parish or Ward) of the District.			TOTAL CASES REMOVED TO HOSPITAL.
	At all Ages	At Ages—Years.						1.	2.	3.	
		Under 1	1 to 5	5 to 15	15 to 25	25 to 45	45 to 65					65 and upwards
Small-pox	...	...	...	...	...	...	...	...	...	...	...
Cholera	...	...	...	...	...	...	...	...	...	...	...
Diphtheria (including Membranous Croup)	23	2	17	2	2	2	2	1	9	9	14
Erysipelas	10	...	1	...	...	...	...	...	6	1	...
Scarlet Fever	56	6	36	14	...	...	...	...	16	8	49
Typhus Fever	...	...	...	...	...	...	...	...	...	...	...
Enteric Fever	7	...	1	4	...	1	1	...	4	2	3
Relapsing Fever	...	...	...	...	...	...	...	...	...	...	...
Continued Fever	...	...	...	...	...	...	...	...	...	...	...
Puerperal Fever	1	...	...	...	...	1	...	...	1	...	...
Plague	...	...	...	...	...	...	...	...	...	...	...
Under Tuberculosis Regulations, 1908	1	...	...	...	...	...	1	...	...	...	...
Phthisis { Under Tuberculosis Regulations, 1911	15	...	4	5	...	5	1	...	10	1	...
{ Others	...	...	...	...	...	...	...	...	...	...	...
Totals	113	2	8	59	25	13	5	1	46	21	66

Isolation Hospital, Chelmsford Joint Hospital, Baddow Road. Total available beds, 21. Number of Diseases that can be con-
currently treated, 2. Also Small-Pox Hospital, 6 beds, at Galleywood, used for Scarlet Fever convalescents.

TABLE III.

BOROUGH OF CHELMSFORD—CAUSES OF, AND AGES AT, DEATH DURING YEAR 1911.

CAUSES OF DEATH.	NETT DEATHS AT THE SUBJOINED AGES OF RESIDENTS WHETHER OCCURRING WITHIN OR WITHOUT THE DISTRICT.										TOTAL DEATHS WHETHER OF "RESIDENTS" OR "NON- RESIDENTS" IN INSTITUTIONS IN THE DISTRICT.
	All ages.	Under 1.	1 and 2.		5 and 15.	15 and 25.	25 and 45.	45 and 65.	65 and up- wards.		
			1 and 2.	4						5		6	7	8	9	10
1	2	3	4	5	6	7	8	9	10	11	
All causes	215	38	5	1	6	6	15	43	102	73	
{ Certified	...	...	...	...	1	2	...	...	...	1
{ Uncertified	...	...	...	...	...	...	...	...	...	...
Enteric Fever	3	...	...	...	...	...	...	...	...	...
Small-pox	...	...	...	...	...	...	...	...	...	...
Measles	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	...	...	...	...	...	...	...	...	...	...
Whooping Cough	...	...	...	...	...	...	...	...	...	...
Diphtheria and Croup	...	...	...	...	...	...	...	...	...	...
Influenza	...	...	...	...	...	...	...	...	...	...
Erysipelas	4	2	...	...	...	...	1	1	...	...
Cerebro-Spinal Fever	...	...	...	...	...	...	...	...	...	...
Phthisis (Pulmonary Tuberculosis)	12	...	...	...	1	2	3	6	1	2
Tuberculous Meningitis	2	1	...	...	...	1	...	...	...	...
Other Tuberculous Diseases	2	1	...	...	...	...	...	...	...	...
Rheumatic Fever	...	...	...	...	...	...	...	...	...	...
Cancer, Malignant Disease	24	...	...	...	...	...	2	11	11	6
Bronchitis	14	6	...	...	...	...	...	...	8	5
Broncho-Pneumonia	6	4	1	1	1	...	4	...	...	6
Pneumonia (all other forms)	6	...	1	...	...	...	...	...	...	...
Other Diseases of Respiratory Organs	...	...	...	...	...	...	...	...	...	...
Diarrhoea and Enteritis	6	6	...	...	...	...	...	...	...	...
Appendicitis and Typhilitis	1	...	...	...	...	1	...	...	...	4
Alcoholism	...	...	...	...	...	...	...	...	...	...
Cirrhosis of Liver	...	...	...	...	...	...	...	...	...	...
Nephritis and Bright's Disease	8	...	...	...	...	...	1	4	3	2
Puerperal Fever	...	...	...	...	...	...	...	...	...	...
Other accidents and diseases of Pregnancy and Parturition	...	...	...	...	...	...	...	...	...	...
Congenital Debility and Malformation, including Premature Birth	14	14	...	...	...	...	...	...	...	3
Violent Deaths, excluding Suicide	...	...	...	...	...	...	...	...	...	...
Suicides	1	...	...	...	...	...	1	...	...	...
Senile Decay	28	...	...	...	...	...	...	...	28	14
Other Defined Diseases	85	4	3	...	3	...	3	21	51	30	

TABLE IV.

BOROUGH OF CHELMSFORD—INFANTILE MORTALITY DURING THE YEAR 1911

Nett Deaths from stated Causes at various Ages under 1 Year of Age.

Cause of Death.		Under 1 Week.	1-2 Weeks.	2-3 Weeks.	3-4 Weeks.	Total under 1 Month.	1-3 Months.	3-6 Months.	6-9 Months.	9-12 Months.	Total Deaths under One Year.
All Causes	{ Certified { Uncertified	11	..	1	..	..	3	11	6	6	38
Small-pox	...	..	..	..	..	..	..	..	..	..	..
Chicken-pox	...	..	..	..	..	..	..	..	..	..	..
Measles	...	..	..	..	..	..	..	..	..	..	..
Scarlet Fever	...	..	..	..	..	..	..	..	..	..	..
Diphtheria and Croup	...	..	..	..	..	..	..	..	..	..	..
Whooping Cough	...	..	..	..	..	..	..	..	..	..	..
Diarrhoea	...	..	..	..	..	..	..	3	2	..	5
Enteritis	...	..	..	..	..	..	..	1	..	..	1
Tuberculous Meningitis	...	..	..	..	..	..	..	1	..	..	1
Abdominal Tuberculosis	...	..	..	..	..	..	..	..	1	..	..
Other Tuberculous Diseases	...	..	..	..	..	..	..	..	..	..	1
Congenital Malformations	...	..	..	..	..	..	..	1	..	..	..
Premature Birth	...	5	..	..	..	..	2	1	1	..	6
Atrophy, Debility, and Marasmus	...	3	..	1	..	..	..	2	..	..	8
Atelectasis	...	..	..	..	..	..	..	..	..	..	..
Injury at Birth	...	..	..	..	..	..	..	1	..	..	2
Erysipelas	...	1	..	..	..	..	..	..	..	..	..
Syphilis	...	..	..	..	..	..	..	..	..	..	..
Rickets	...	..	..	..	..	..	..	..	..	1	1
Meningitis (<i>not Tuberculous</i>)	...	..	..	..	..	..	..	..	..	..	..
Convulsions	...	..	..	..	..	..	..	..	..	..	..
Gastritis	...	..	..	..	..	..	..	..	..	..	..
Laryngitis	...	..	..	..	..	..	..	..	..	..	..
Bronchitis	...	1	..	1	..	..	1	1	1	1	6
Pneumonia (all forms)	...	..	..	..	..	..	..	..	1	3	4
Suffocation, overlying	...	..	..	..	..	..	..	..	..	..	..
Other Causes	...	1	..	..	..	..	..	1	..	1	3

Nett Births in the year { legitimate, 370.
 { illegitimate, —

Nett Deaths in the year of { legitimate infants, 36.
 { illegitimate infants, 2.

BOROUGH OF CHELMSFORD —PHTHISIS : SANATORIUM AND HOSPITAL ACCOMMODATION.

Classes for which accommodation is provided.	By whom provided.	Where situated.	Total number of Beds.	How are patients selected ?	Are patients under the care of a resident Medical Officer ?	What charge, if any, is made for the use of Beds ?	Do the Sanitary Authority use— (1) their Isolation Hospital, or (2) their Small-pox Hospital, for cases of Phthisis ?	Do the Sanitary Authority re-serve Beds in any Phthisis Sanatorium : If so, how many, and in what Sanatorium ?	Do the Sanitary Authority provide portable open-air Shelters or Tents ?
(a) Early cases...	Nil	—	—	—	—	—	No	No	No
(b) Intermediate cases	Nil	—	—	—	—	—	—	—	—
(c) Advanced cases	Nil	—	—	—	—	—	—	—	—

Have the Council, or any Private Body, provided a Dispensary. If so, give particulars No.

ANNUAL REPORT OF THE MEDICAL OFFICER OF HEALTH FOR THE YEAR 1911 FOR THE BOROUGH OF CHELMSFORD,

On the administration of the Factory and Workshop Act, 1901, in connection with
FACTORIES, WORKSHOPS, WORKPLACES, AND HOMEWORK.

1.—INSPECTION.

Including Inspections made by Sanitary Inspectors or Inspectors
of Nuisances.

Premises.	Number of		
	Inspections.	Written Notices.	Prosecutions.
FACTORIES ... (Including Factory Laundries.) ...	—	—	—
WORKSHOPS ... (Including Workshop Laundries.) ...	179	—	—
WORK PLACES ... (Other than Outworkers' premises included in Part 3 of this Report.) ...	—	—	—
Total ...	179	—	—

2.—DEFECTS FOUND.

Particulars.	Number of Defects.			Number of Prosecutions
	Found.	Remedied.	Referred to H. M. Inspector.	
<i>Nuisances under the Public Health Acts :</i>				
Want of Cleanliness	11	11		
Want of Ventilation	3	3		
Overcrowding	1	1		
Want of drainage of floors				
Other nuisances	19	19		
Sanitary accomoda- tion. { Insufficient	1	1		
{ Unsuitable or defective				
{ Not separate for sexes				
<i>Offences under the Factory and Workshop Act :—</i>				
Illegal occupation of underground bakehouse (s. 101)				
Breach of special sanitary require- ments for bakehouses (ss. 97 to 100)				
Other offences				
(Excluding offences relating to out- work which are included in Part 3 of this Report.)				
Total	35	35		

3.—HOME WORK.

OUTWORKERS' LISTS, SECTION 107.																			
NATURE OF WORK.	Lists received from Employers.							Addresses of Outworkers.		Prosecutions.		Inspections of Outworkers' premises.	OUTWORK IN UNWHOLESOME PREMISES, SECTION 108.					OUTWORK IN INFECTED PREMISES, SECTIONS 109, 110.	
	Twice in the year.			Once in the year.				Received from other Councils.	Forwarded to other Councils.	Notices served on Occupiers as to keeping or sending lists.	Prosecutions.		(14) Instances.	(15) Notices served.	(16) Prosecutions.	(17) Instances.	(18) Orders made (s. 110).	(19) Prosecutions (Sections 109, 110).	
	Lists.	Outworkers.		Lists.	Outworkers.						(11) or permit inspection of lists.								(12) Failing to send lists.
		Contractors.	Workmen.		Contractors.	Workmen.													
							(2)													(3)	(4)	(5)	(6)	(7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	
Wearing apparel—	11	...	68	...	...	...	...	...	...	...	...	62	...	...	...	...	...	...
(1) making, &c.	
(2) cleaning and washing	
Lace, lace curtains and nets...	
Artificial flowers...	
Nets, other than wire nets	
Tents	
Sacks	
Furniture and upholstery	
Fur pulling	
Feather sorting	
Umbrellas, &c.	
Carding, &c., of buttons, &c.	
Paper bags and boxes	
Basket making	
Brush making	
Racquet and tennis balls	
Stuffed toys	
File making	
Electro-plate	
Cables and chains	
Anchor and grapnels	
Cart gear	
Locks, latches and keys	
Pea picking	
Total	11	...	68	...	...	...	...	...	...	...	...	62	...	...	...	...	...	...

4.—REGISTERED WORKSHOPS.

Workshops on the Register (s. 131) at the end of the year.					Number.
Important classes of workshops, such as workshop bake- houses, may be enu- merated here.	Bakehouses	..	...	...	20
	Dressmaking	...	...	...	16
	Millinery	...	...	...	11
	Costumes	...	...	...	5
	Underclothing	...	...	...	2
	Harness	...	...	...	3
	Furniture Hangings	..	...	...	2
	Plumbers		...	...	20
	Builders	...	...	...	8
	Rag Sorting	...	...	...	3
	Cycles	...	...	...	3
	Tailors	...	..	..	3
Total number of Workshops on Register					96

5.—OTHER MATTERS.

Class.	Number
Matters notified to H.M. Inspector of Factories :—	
Failure to affix Abstract of Factory and Workshop Act (s. 133)	Nil
Action taken in matters referred by H.M. Inspector as remediable under Public Health Acts, but not under the Factory and Work- shop Act (s. 5)	Notified by H.M. Inspector Reports (of action taken) sent to H.M. Inspector ..
Other	Nil
Underground Bakehouses (s. 101) :—	
Certificates granted during the year	...
In use at the end of the year	1

REPORT

of the Inspector of Nuisances for the year ended
31st December, 1911.

Complaints received ...	...	...	...	63
Nuisances detected ...	...	...	...	678
Nuisances abated ...	...	...	...	651
Number of Informal Notices given		...	...	467
Number of Official Notices served		...	...	26
Summonses taken out	...	...	...	Nil
Convictions	...	...	...	Nil
Houses inspected ...	...	...	...	707
Number of re-inspections	...	...	..	1135
Common Lodging Houses (2), Number of Inspections	...			58
Slaughter Houses (9), Number of Inspections			...	169
Bakehouses (20), Number of Inspections	...		...	105
Dairies and Milkshops (12), Number of Inspections	...		...	75
Cowsheds (8), Number of Inspections	...		...	86

NOTE.—All the Cowsheds have been limewashed at least twice during the year, two floors have been relaid, the udders of 17 cows were cleansed, and 23 cows were groomed.

Workshops inspected	...	...	...	91
Filthy Houses cleansed, Section 46, Public Health Act, 1875	...	...	...	7
Houses fumigated :—				
Scarlet Fever	...	...	...	54
Diphtheria	...	...	...	24
Consumption	...	...	...	16
Cancer	...	...	...	7
Small Pox, Suspected case (the Surgery and Waiting Room of the Medical Attendant)	...		...	1
Typhoid Fever	...	...	...	3
Cab fumigated after removal of a Diphtheria patient				1

The Infected Bedding from all these houses and also Clothing of Five Contacts with the suspected Small Pox case were sent to the Joint Hospital Board's Disinfectors to be disinfected.

Patients removed to Isolation Hospital :—

Scarlet Fever	49
Diphtheria	13
Small Pox (suspected)	1
Overcrowding abated	6
Houses closed	Nil
Wells sunk or improved supplies of water afforded ...	Nil
Wells cleansed or repaired	2
Earth, pail, or improved privies constructed or existing	
Privies altered	1
W.C.'s repaired	23
W.C.'s supplied with Water, viz., Flushing Apparatus provided ; this does not include new Houses built during the year	20
Flushing apparatus repaired	22
Cisterns cleansed, repaired, or covered	17
Accumulations of Manure removed	68
Animals improperly kept removed, (this includes 53 fowls kept close to back doors)	72
Samples of Water taken for analysis	4
Samples of Milk taken for analysis	26
Glazed Gulley Traps fixed	17
Drains tested	81
,, unblocked	22
,, ventilated	4
Ventilating Shaft repaired	1
Houses placed in habitable repair	27
Manure Pits built	2
,, repaired	5
Galvanised iron sanitary dustbins provided	66

Elementary Schools within the Borough, viz. :—

Victoria Boys, Girls, Infants.
 Friars Council Infants.
 St. John's Boys, Girls, Infants.
 St. Peter's Infants.
 Roman Catholic Mixed.
 Springfield Boys, Girls.
 Trinity Infants
 Trinity Road Council Boys, Girls.

The Sanitary Conveniences of these Schools are inspected monthly as to cleanliness. A monthly report is made to the Education Committee, and the number of inspections has been 159

All the Schools are fumigated during the year.

Cattle Market. Diseased Animals :—

Two cows were detected in the Market suffering from Tuberculous Udder, one with a suspicious udder, four emaciated, one Tuberculosis, one with pus in all four quarters. Two were sold to a knacker and were killed. Post mortems were made by the Veterinary Surgeon. The owners of the others were given the opportunity of removing same from the Market which was done forthwith. Two emaciated pigs were also detected.

I attend the Cattle Market each market day during the year (except when absent on holiday) with the Veterinary Surgeon (Mr. Mulvey).

Offensive Trades :—

There are only two in the Borough, viz. :—Messrs. Dixon and Son and Mr. J. Budds. The premises are frequently inspected and found to be kept in a satisfactory condition.

Factory and Workshop Act :—

Workshops inspected	...	...	...	91
Bakehouses limewashed	...	...	...	11
Paving repaired...	...	...	...	1
Plaster of ceiling repaired	..	...	...	2
Walls cleansed	...	..	...	8
W.Cs. cleansed	...	...	...	3
Accumulation of Bones removed	...	...	...	1
Fumes from Gas Stove made to escape into the open				2
Windows made to open	...	...	...	2
Floor repaired	...	...	...	1
Flushing apparatus provided to W.C.	...	...	...	1
No Sanitary Convenience provided	...	...	...	1
Improved Ventilation provided	...	...	...	2

Housing Town Planning, &c., Act:—

Inspections made	...	...	...	235
Roof repaired	...	...	...	1
Staircase repaired	...	...	...	2
Overcrowding abated	...	...	...	6
Galvanised Iron Sanitary Dust Bins provided	...	...	...	66
W.C's. repaired	...	...	...	3

Troughing repaired	...	...	...	22
Paving of yards repaired	...	...	...	49
Outside Walls covered with an impervious material				11
Plaster of ceilings repaired	...	...	...	6
Floors repaired	...	...	...	6
Staircase repaired	...	...	...	2
Houses cleansed	...	...	...	9
Outside Walls re-tarred	..	...	...	2
W.C's. cleansed...	...	...	...	14
Sinks disconnected	...	...	...	2
Defective drains...	...	...	...	2
Ventilating Shafts repaired	...	...	...	5
Caravans condemned as unfit for human habitation				3
New W.C. built	...	...	...	1
Chimneys repaired	...	...	...	2

WM KIRKHAM BAKER,

Cert., Royal Sanitary Institute,

Inspector of Nuisances.

